AMENDMENTS TO THE CLAIMS:

The following listing of claims supersedes all prior versions and listings of claims

in this application:

1.   (Currently Amended) An automated dialogue apparatus comprising:

a buffer for storing coded representations;

speech generation means operable to generate a speech signal from the coded

representation for confirmation by a user;

speech recognition means operable to ~~recognise~~ recognize speech received from

the user and generate a coded representation of thereof;

means operable to compare the coded representation from the ~~recogniser~~

recognizer of a response from the user with the contents of the buffer to determine, for

each of a plurality of different alignments between the coded response and the buffer

contents, a respective similarity measure, wherein at least some of said comparisons

involve comparing only a leading portion of the coded response with a part of the buffer

contents already uttered by the speech generation means; and

means for replacing at least part of the buffer contents with at least part of said ~~recognised~~ recognized response, in accordance with the alignment having the similarity measure indicative of the greatest similarity.

2. (Currently Amended) An apparatus according to claim 1, including an input buffer operable to hold said coded representation from the ~~recogniser~~ recognizer of a response from the user while said comparison is performed.

3. (Currently Amended) An apparatus according to claim 1, arranged so that said coded representation from the ~~recogniser~~ recognizer of a response from the user is entered into the buffer prior to said comparison, and the replacing means is operable thereafter to adjust its position in the buffer.

4. (Previously Presented) An automated dialogue apparatus according to claim 1, further comprising means operable to divide the buffer contents into at least two portions, to supply an earlier portion to the speech generation means and to await a response from the user before supplying a later portion to the speech generation means, wherein at least some of said comparisons involve comparing the coded response with a

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concatenation of a part of the buffer contents already uttered by the speech generation means and the portion which, in the buffer, immediately follows the part of the buffer contents already uttered by the speech generation means.

5.   (Previously Presented) An apparatus according to claim 1 including means operable to record status information defining the buffer contents as confirmed, offered for confirmation but not confirmed, and yet to be offered for confirmation.

6.   (Original) An apparatus according to claim 5 in which the status information also includes indications of the condition that the respective coded representation has been corrected following non-confirmatory input from the user.

7.   (Original) An apparatus according to claim 5 in which the status information is recorded by means of pointers indicating boundary positions within the buffer between representations having respective different status.

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8.   (Previously Presented) An apparatus according to claim 5 in which the

buffer has a plurality of locations each for containing a coded representation, and for each

location a status field for storing the associated status.

9.   (Previously Presented) An apparatus according to claim 5 in which the

similarity measure is a function of (a) differences between the coded representation of the

user's response and the contents of the buffer and (b) the status of those contents.

10.   (Previously Presented) An apparatus according to claim 5 in which the

similarity measure is a function also of the alignment or otherwise of phrasal boundaries

in the representations being compared.

11.   (Previously Presented) An apparatus according to claim 1 in which a

portion of the coded representation of the user's response that in any particular alignment

precedes the buffer contents is deemed to be inserted at the beginning of the buffer.

12.   (Previously Presented) An apparatus according to claim 1 in which a portion of the coded representation of the user's response that in any particular alignment which follows the buffer contents does not contribute to the similarity measure.

13.   (Previously Presented) An apparatus according to claim 1 in which the comparing means is operable in accordance with a dynamic programming algorithm.

14.   (Currently Amended) An apparatus according to claim 1 wherein:

the replacing means is operable, in the event that the alignment having the similarity measure indicative of the greatest similarity is an alignment corresponding to a pure continuation of the part of the buffer contents already uttered by the speech generation means, to enter the coded response into the buffer at such position and to mark the position within the buffer at which such entry began; and

said apparatus [[means]] is operable to examine the buffer contents and to compare a part of the buffer contents immediately following a marked position with a part immediately preceding the same marked position to determine whether or not said immediately following part can be interpreted as a correction or partial correction of said immediately preceding part.

15.   (Original) An apparatus according to claim 14 in which the replacing

means is operable, in the event that the alignment having the similarity measure

indicative of the greatest similarity is an alignment in which a non-leading portion of the

coded response corresponds to a correction of that part of the buffer contents most

recently uttered by the speech generation means, to insert the leading portion of the coded

response into the buffer before the most recently uttered part, and to mark the position

within the buffer at which such insertion began.

16.   (Previously Presented) An apparatus according to claim 14, in which the

means to examine and compare is operable in accordance with a dynamic programming

algorithm.

17.   (Currently Amended) An automated dialogue apparatus according to claim

1, including means operable to ~~recognise~~ <u>recognize</u> a spoken response containing an

indication of non-confirmation and in response thereto to suppress selection of an

alignment corresponding to a pure continuation of the part of the buffer contents already

uttered by the speech generation means.

18.   (Currently Amended) A method of speech recognition comprising:

(a) receiving a coded representation;

(b) performing at least once the steps of

(b1) ~~recognising~~ recognizing speech from a speaker to generate a coded version thereof;

(b2) updating the coded representation by concatenation of at least part thereof with this ~~recognised~~ recognized coded version of recognized speech;

(b3) marking the position within the updated representation at which said concatenation occurred; and

(c) comparing a part of the updated representation immediately following the marked position with a part immediately preceding the same marked position to determine whether or not said immediately following part can be interpreted as a correction or partial correction of said immediately preceding part.

19-20.   Cancelled.

21.   (Previously Presented) A method according to claim 18 including performing the comparison in respect of a plurality of marked positions and performing the correction or partial correction in respect of that one of the marked positions for which a set criterion is satisfied.

22.   (Previously Presented) A method according to claim 18 including performing the comparison in respect of a plurality of marked positions and performing the correction or partial correction in respect of a plurality of marked positions for which a set criterion is satisfied

23.   (Previously Presented) A method according to claim 21 in which the set criterion is that the corrected updated representation corresponds to an expected length.

24.   (Previously Presented) A method according to claim 21 in which the set criterion is that the corrected updated representation matches a predetermined pattern definition.

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25.   (Currently Amended) A method according to claim 18 including, in step

(b), examining the ~~recognised~~ <u>recognized</u> coded representation to determine whether it is

to be immediately interpreted as a correction or partial correction, and performing such

correction or partial correction, including continuation, if any;

wherein the steps of concatenation and marking are performed only in the event

that the ~~recognised~~ <u>recognized</u> coded representation is determined as not to be

immediately interpreted as a correction or partial correction.

26.   (Previously Presented) A method according to claim 18 including

generating, for confirmation, a speech signal from only part of the current coded

representation, wherein said concatenation occurs at the end of that part.

27.   (Previously Presented) A method according to claim 18 in which the coded

representation of step (a) is also generated by recognition of speech from the speaker.

28.   (Previously Presented) A method according to claim 18 in which:

step (b) is performed at least twice;

step (c) comprises performing a plurality of evaluations corresponding to different

selections of one or more of said marked positions;

wherein each evaluation comprises performing said comparison in respect of the

or each selected marked position and generating a cost measures as a function of the

similarity determined by said comparison (s); and

wherein the question of which selection is to be chosen is determined based on

said cost measure.

29.   (Original) A method according to claim 28 in which said plurality of

evaluations also include evaluations of the same selection of two or more marked

positions processed in a different order.

30.   (Previously Presented) A method according to claim 18 in which said

comparison is performed by means of a dynamic programming algorithm.

31.   (Currently Amended) A method of speech recognition comprising:

(a) ~~recognising~~ recognizing speech received from a speaker and generating a

coded representation of each discrete utterance thereof[[;]] and storing a plurality of

representations of discrete utterances in sequence in a buffer, including markers

indicative of divisions between units corresponding to the discrete utterances;

(b) performing a comparison process having a plurality of comparison steps,

wherein each comparison step comprises comparing a first comparison sequence,

[[(]]each of which comprises a unit or leading portion thereof[[)]], with a second

comparison sequence which, in the stored sequence, immediately precedes the first

comparison sequence, so as to determine whether the first and second comparison

sequences meet a predetermined criterion of similarity;

(c) in the event that the comparison process identifies only one instance of first

and second comparison sequences meeting the criterion, deleting the second comparison

sequence of that instance from the stored sequence.

32.   (Currently Amended) A method of speech recognition comprising:

(a) ~~recognising~~ recognizing speech received from a speaker and generating a

coded representation of each discrete utterance thereof; and storing a plurality of

representations of discrete utterances in sequence in a buffer, including markers

indicative of divisions between units corresponding to the discrete utterances;

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in response to a parameter which defines an expected length for the stored

sequence, the step of comparing the actual length of the stored sequence with the

parameter and in the event that the actual length exceeds the parameter:

(b) performing a comparison process having a plurality of comparison steps,

wherein each comparison step comprises comparing a first comparison sequence (each of

which comprises a unit or leading portion thereof) with a second comparison sequence

which, in the stored sequence, immediately precedes the first comparison sequence, so as

to determine whether the first and second comparison sequences meet a predetermined

criterion of similarity;

(c) in the event that the comparison process identifies only one instance where

both (i) the length of the second comparison sequence is equal to the difference between

the actual and expected length and (ii) the first and second comparison sequences meet

the criterion, deleting the second comparison sequence of that instance from the stored

sequence.

33.   (Previously Presented) A method according to claim 31 comprising, in the

case that no deletion is performed at step (c), performing a further such comparison

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process having a different predetermined criterion and/or a different manner of selection of the first and second comparison sequences.

34.   (Currently Amended) A method of speech recognition comprising:

(a) storing a coded representation;

(b) selecting a portion of the stored coded representation;

(c) supplying the selected portion to speech generation means operable to generate a speech signal therefrom for confirmation by a user;

(d) ~~recognising~~ recognizing a spoken response from the user to generate a coded representation thereof; and

(e) updating the stored coded representation on the basis of the ~~recognised~~ recognized response; wherein said updating includes updating at least one part of the stored coded representation other than the selected portion.

35.   (Previously Presented) A method according to claim 34 including the step of (f) repeating steps (b) to (d) at least once.

36.   Cancelled.

37.   (Currently Amended) A method according to claim 34 in which said

updating includes, according to the content of the ~~recognised~~ <u>recognized</u> coded

representation, one or more of :

(i) correcting the selected portion or part thereof;

(ii) entering at least part of the ~~recognised~~ <u>recognized</u> coded representation into the

stored coded representation at a position immediately following the selected portion.

38.   (Currently Amended) A method according to claim 37 in which said

updating includes, according to the content of the ~~recognised~~ <u>recognized</u> coded

representation,

(iii) inserting a leading part of the ~~recognised~~ <u>recognized</u> coded representation into

the stored coded representation at a position before the selected portion.

39.   (Previously Presented) A method according to claim 37 including

generating for each entered part and any inserted part a second marker indicative of the

position thereof within the stored coded representation.

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40.   (Original) A method according to claim 39 comprising the subsequent step

of comparing, for the or each second marker, a part of the updated representation

immediately following a position marked by that second marker with a part immediately

preceding the same marked position to determine whether said immediately following

part can be interpreted as a correction or partial correction of said immediately preceding

part.

41-43.   Cancelled.

44.   (Currently Amended) An automated dialogue apparatus comprising:

speech generation means operable to generate a speech signal from a coded

representation for confirmation by a user; and

means operable to divide the coded representation into at least two portions, to

supply a first portion to the speech generation means and to await a response from the

user before supplying any further portion to the speech generation means;

~~characterised by~~ means for ~~recognising~~ recognizing predetermined patterns in the

coded representation and wherein upon such recognition, one of the portions is

determined by reference to a ~~recognised~~ recognized pattern;

wherein the predetermined patterns are predetermined numeric digit sequences

occurring at the commencement of the representation.

45-46.   Cancelled.

47.   (Previously Presented) An apparatus according to claim [[45]] 44 in which

the remainder of the coded representation is divided into portions such that each such

portion shall not exceed a predetermined length.

48.   (Currently Amended) An apparatus according to claim 44 including speech

recognition means operable to ~~recognise~~ recognize speech received from the user and

generate the coded representation therefrom.

49.   Cancelled.

50.   (Previously Presented) An automated dialogue method comprising:

storing coded representations including markers indicative of points of ambiguity;

comparing, for each of a plurality of different alignments thereof, a part of the coded representations immediately following a marked point with a part immediately preceding the same marked point to determine whether or not said immediately following part can be interpreted as a correction or partial correction of said immediately preceding part;

wherein at least some of said comparisons involve comparing only a leading portion of said immediately following part with said immediately preceding part; and

if said immediately following part can be so interpreted, performing the correction or partial correction after the determination is made.

51. Cancelled.

52. (Currently Amended) An automated dialogue apparatus comprising:

speech recognition means operable to recognize speech received from a speaker and generate a coded representation thereof;

timeout means operable to determine in accordance with a slice duration parameter when an utterance being recognized is deemed to have ended; and

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means operable, during an utterance, in dependence on the contents of the
utterance to date, to vary the timeout parameter for the continuation of that utterance;

wherein said variation is conditional upon the initial part of the utterance matching

one of a predetermined set of known utterances.

53.   (Currently Amended)   An automated dialogue apparatus comprising:

speech recognition means operable to recognize speech received from a speaker

and generate a coded representation thereof;

timeout means operable to determine in accordance with a slice duration

parameter when an utterance being recognized is deemed to have ended; and

means operable, during an utterance, in dependence on the contents of the

utterance to date, to vary the timeout parameter for the continuation of that utterance;

if said immediately following part can be so interpreted,

performing the correction or partial correction after the determination is made

wherein said variation is conditional upon recognition in the utterance of input

indicative of negative confirmation to increase the timeout parameter for the remainder of

that utterance.

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54. (Currently Amended) An automated dialogue apparatus comprising:

speech recognition means operable to ~~recognise~~ recognize speech received from a

speaker and generate a coded representation thereof;

timeout means operable to determine in accordance with a silence duration

parameter when an utterance being ~~recognised~~ recognized is deemed to have ended; and

~~characterized by~~

means operable in dependence on a dialogue state to vary the timeout parameter

between first and second dialogue states respectively corresponding to first and second

timeout values.